

BANATULASI—CONTROLLING PARTHENIUM

Shibabrata Pattanayak and Nisith Mondal

Parthenium is a very poisonous plant causing severe problems in agricultural operations and also to human and animal health. During the mid-sixties, huge amount of wheat was imported into India every year from U.S.A. *Parthenium* weeds, present in that imported wheat (PL-480), got a smooth passage, adapted to Indian climatic conditions and spread throughout the country. Of late, these are creating nuisance in agricultural fields also.

Croton bonplandianum, commonly known as *Banatulasi*, a member of the family Euphorbiaceae, is well known for its power of blood clotting and healing of wounds from ancient times. Banatulasi can be grown on any type of wasteland, is very hardy and can withstand climatic stresses like hot, cold or even the dryness of the soil. It is harmless to the agricultural crops and also very easy to cultivate. This plant has the power to inhibit the aggression of the dangerous *Parthenium* through its antagonistic effects.

Parthenium contains many poisonous chemicals in its leaves, seeds and flowers. Among them parthenin is the most crucial. Besides, caffeic acid, p-anisic acid, vanillic acid, perhydroxy benzoic acid etc are also present in *Parthenium*. Pollen grains of *Parthenium* are most dangerous as the pollens can easily be carried by air and water and can cause allergic reactions after entering into the body-system of human beings. In case of sensitive individuals, exposure to these pollens can give rise to local allergic reactions known as Hay fever and Asthma. *Parthenium* can also cause local reactions on the skin of hands, legs and also eyes. Long time exposure to *Parthenium* can also cause cancer in the lungs and skin.

Parthenium plant-wash or plant extracts have the power to hamper the normal growth and development of adjacent plants. That is the reason why *Parthenium* spreads profusely in an area.

To check the aggression of *Parthenium* weeds, the cultivation of Banatulasi plant has proven effective. Both *Parthenium* and Banatulasi can grow almost on the same type of land and for this reason it becomes very easy for Banatulasi to resist the growth of *Parthenium*. The resistance is mainly a competitive inhibition. Banatulasi shows the over-dominance effect on the deadly *Parthenium* through its biochemical as well as genetic make-up. Banatulasi plants spread by spontaneous germination. They are thus able to protect the susceptible land against any further invasion of *Parthenium*.

Banatulasi seed cannot reach the agricultural fields by air or water as *Parthenium* seeds can, and so they get no chance to become a 'weed'. The extract of Banatulasi plant does not have any negative impact on the growth of any other plant. On the other hand, the longer root and hardy nature of Banatulasi plant may be helpful in preservation of soil.